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JC05 Rec'd PCT/PTO 1 6 JUL 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



ATTY.'S DOCKET: SOLOMON=2C

In re Application of)	Art Unit:
Beka SOLOMON et al)	Examiner:
Appln. No.: 09/830,954)	Washington, D.C.
Filed: May 3, 2001)	
For: AGENTS AND COMPOSITIONS)	
AND METHODS UTILIZING)	
SAME USEFUL IN...)	

INFORMATION DISCLOSURE STATEMENT [IDS]

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir :

This Information Disclosure Statement is submitted in accordance with 37 CFR §§1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

[X] 1. This IDS should be considered, in accordance with 37 CFR §1.97, as it is filed:

(Check one of the boxes A-D)

[X] A. within three months of the filing date of the above-identified national application or within three months of the entry into the national stage of the above-identified international application.

☒ B. before the mailing date of a first office action on the merits.

☐ C. after (A) and (B) above, but before final rejection or allowance, and Applicants have made the necessary certification (box "i" below) or paid the necessary fee (box "ii" below).

(Check one of the boxes "i" and "ii" below:)

☐ i. Counsel certifies that, upon information and belief, each item of information listed herein was either

☐ (a) first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or

☐ (b) not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of undersigned after making reasonable inquiry, was not known to any individual designated in §1.56(c) more than three months prior to the filing of this IDS.

(use one and delete other of following)

☐ ii. A check (check no. _____) for the fee set forth in §1.17(p), presently believed to be \$180, is enclosed.

☐ ii. Credit Card Payment Form, PTO-2038, is attached authorizing payment of the fee set forth in §1.17(p), presently believed to be \$180.

☐ D. after (A), (B) and (C) above, but before payment of the issue fee: Applicant(s) petitions under 37 CFR §1.97(d) for consideration of this IDS. ***(use one and delete***

other of following and this note) A check (check no. _____) for/ Credit Card Payment Form, PTO-2038, is attached authorizing payment of the fee set forth in \$1.17(i), presently believed to be \$130 is enclosed. Counsel certifies that, upon information and belief, each item of information listed herein was either

(Check one of the boxes "a" and "b" below)

☐ (a) first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or

☐ (b) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was not known to any individual designated in \$1.56(c) more than three months prior to the filing of this IDS.

☒ 2. In accordance with 37 CFR \$1.98, this IDS includes a list (e.g., form PTO-1449) of all patents, publications, or other information submitted for consideration by the office, either incorporated into this IDS or as an attachment hereto. A copy of each document listed is attached, except as explained below.

(check boxes A and/or B and fill in blanks, if appropriate)

☐ A. Document(s) _____ is (are) deemed substantially cumulative to document(s) _____, and, in accordance with \$1.98(c), only a copy of each of the latter documents is enclosed.

☐ B. Certain documents were previously cited by or submitted to the Office in the following prior application(s), which are relied upon under 35 U.S.C. 120:

(insert serial numbers and filing dates of prior applications)

Applicant(s) identifies these documents by attaching hereto copies of the forms PTO-892 and PTO-1449 from the files of the prior application(s) or a fresh PTO-1449 listing these documents, and request that they be considered and made of record in accordance with §1.98(d). Per 37 CFR §1.98(d), copies of these documents need not be filed in this application.

☐ 3. Document(s) _____ is (are) not in the English language. In accordance with §1.98(c), Applicant(s) states:

☐ An English translation of each document _____ (or of the pertinent portions thereof), or a copy of each corresponding English-language patent or application, or English-language abstract (or claim) is enclosed.

☐ A concise explanation of the relevance of document(s) _____ is found in the attached _____ search report (see reply to Comment 68 in the preamble to the final rules; 1135 OG 13 at 20).

☐ A concise explanation of the relevance of document(s) _____ is set forth as follows:

(insert concise explanation of relevance)

☐ A concise explanation of the relevance of document(s) _____ can be found on page(s) _____ of the specification.

☐ A concise explanation of document(s) _____ can be found on the attached sheet.

[X] 4. No explanation of relevance is necessary for documents in the English language (see reply to Comments 67 and 68 in the preamble to the final rules; 1135 OG 13 at 20).

[X] 5. Other information being provided for the examiner's consideration follows:

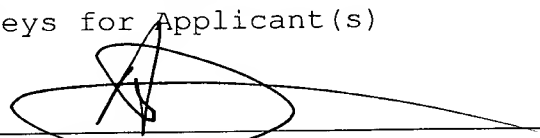
Attached hereto is an International Search Report.

6. In accordance with 37 CFR §§1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in §1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant(s) reserves the right to prove that the date of publication is in fact different.

Respectfully submitted,

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	09/830,954
Filing Date	May 3, 2001
First Named Inventor	Beka SOLOMON et al.
Group Art Unit	
Examiner Name	
Attorney Docket Number	SOLOMON=2C

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	AA	5,811,093		MERRIL et al.,	09-22-1998	

FOREIGN PATENT DOCUMENTS

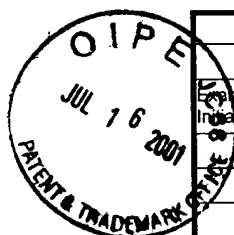
Examiner Initials*	Cite No. ¹	Foreign Patent Number		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number				
	AB	PCT	WO 92/07077	GREENWOOD	04-30-1992		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	AC	SMITH, "Surface presentation of protein epitopes using bacteriophage expression systems", <u>Current Opinion in Biotechnology</u> , 2:668-673 (1991)	
	AD	RENAULD-MONGENIE et al., "Induction of mucosal immune responses against a heterologous antigen fused to filamentous hemagglutinin after intranasal immunization with recombinant <i>Bordetella pertussis</i> ", <u>Proc. Natl. Acad. Sci. USA</u> , 93:7944-7949 (1996)	
	AE	CESARENI et al., "Minireview Peptides display on filamentous phage capsids a new powerful tool to study protein ligand interaction", <u>FEBS Letters</u> , 307:66-70 (1992)	
	AF	HUSE et al., "Application of a filamentous phage pVIII fusion protein system suitable for efficient production screening, and mutagenesis of F(ab) antibody fragments", <u>The Journal of Immunology</u> , (1992)	
	AG	JONES et al., "Display of antibody chains on filamentous bacteriophage", <u>Methods in Molecular Biology</u> , 80:449-459	
	AH	CHANG et al., "Expression of antibody Fab domains on bacteriophage surfaces potential use for antibody selection", <u>Journal of Immunology</u> , 147:3610-3614 (1991)	
	AI	GLASER et al., "Antibody engineering by codon-based mutagenesis in a filamentous phage vector system", <u>The Journal of Immunology</u> , 149:3903-3913 (1992)	
	AJ	HOOGENBOOM et al., "Building antibodies from their genes", <u>Immunological Reviews</u> , 130:41-68 (1992)	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.



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STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 2

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Complete if Known

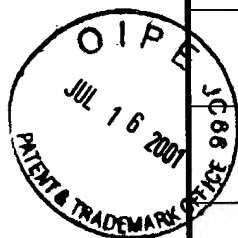
Application Number	09/830,954
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	AK	BARBAS et al., "Semisynthetic combinatorial antibody libraries: a chemical solution to the diversity problem", <u>Natl. Acad. Sci. USA</u> , 4457:4461 (1992)	
	AL	MARKS et al., "Molecular evolution of proteins on filamentous phage", <u>The Journal of Biological Chemistry</u> , 267:16007-16010 (1992)	
	AM	HAWKINS et al., "Selection of phage antibodies by binding affinity mimicking affinity maturation", <u>J. Mol. Biol.</u> , 226:889-896 (1992)	
	AN	WETZEL, "Commentary learning from the immune system laboratory methods for creating and refining molecular diversity in polypeptides", <u>Protein Engineering</u> , 4:371-374 (1991)	
	AO	LERNER et al., "Antibodies without immunization", <u>Science</u> , 258:1313-1314 (1992)	
	AP	BARBAS et al., "Recombinant human Fab fragments neutralize human type 1 immunodeficiency virus <i>in vitro</i> ", <u>Proc. Natl. Acad. Sci. USA</u> , 89:9339-9343 (1992)	
	AQ	ZEBEDEE et al., "Human combinatorial antibody libraries to hepatitis B surface antigen", <u>Proc. Natl. Acad. Sci. USA</u> , 89:3175-3179 (1992)	
	AR	GRAM et al., " <i>In vitro</i> selection and affinity maturation of antibodies from a naïve combinatorial immunoglobulin library", <u>Proc. Natl. Acad. Sci. USA</u> , 89:3576-3580 (1992)	
	AS	KANG et al., "Antibody redesign by chain shuffling from random combinatorial immunoglobulin libraries", <u>Proc. Natl. Acad. Sci. USA</u> , 88:11120-11123 (1991)	
	AT	MARKS et al., "Molecular evolution of proteins on filamentous phage", <u>The Journal of Biological Chemistry</u> , 267:16007-16010 (1992)	
	AU	GARRARD et al., "Assembly and enrichment in a monovalent phage display system", <u>Biotechnology</u> , 9:1373-1377 (1991)	
	AV	GOESSLING et al., "Enhanced degradation of the ferritin repressor protein during induction of ferritin messenger RNA translation", <u>Science</u> , 256:670 (1992)	
	AW	MARKS et al., "By-passing immunization human antibodies from V-gene libraries displayed on phage", <u>J. Mol. Biol.</u> , 222:581-597 (1991)	

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STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 3

of 4

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Application Number	09/830,954
Filing Date	May 3, 2001
First Named Inventor	Beka SOLOMON et al.
Group Art Unit	
Examiner Name	
Attorney Docket Number	SOLOMON=2C

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	AX	CLACKSON et al., "Letters to nature making antibody fragments using phage display libraries", <u>Nature</u> , 352:624-628 (1991)	
	AY	BARBAS et al., "Assembly of combinatorial antibody libraries on phage surfaces: The gene III site", <u>Proc. Natl. Acad. Sci. USA</u> , 88:7978-7982 (1991)	
	AZ	MCCAFFERTY et al., "Letters to nature phage antibodies: filamentous phage displaying antibody variable domains", <u>Nature</u> , 348:552-554 (1990)	
	BA	KANG et al., "Linkage of recognition and replication functions by assembling combinatorial antibody Fab libraries along phage surfaces", <u>Proc. Natl. Acad. Sci. USA</u> , 88:4363-4366 (1991)	
	BB	BURTION et al., "A large array of human monoclonal antibodies to type 1 human immunodeficiency virus from combinatorial libraries of asymptomatic seropositive individuals", <u>Proc. Natl. Acad. Sci. USA</u> , 88:10134-10137 (1991)	
	BC	BREITLING et al., "A surface expression vector for antibody screening", <u>Gene</u> , 104:147-153 (1991)	
	BD	HOOGENBOOM et al., "Multi-subunit proteins on the surface of filamentous phage: methodologies for displaying antibody (Fab) heavy and light chains", <u>Nucleic Acids Research</u> , 19:4133-4137 (1991)	
	BE	BARBAS et al., "Human monoclonal Fab fragments derived from a combinatorial library bind to respiratory syncytial virus F glycoprotein and neutralize infectivity", <u>Proc. Natl. Acad. Sci. USA</u> , 89:10164-10168 (1992)	
	BF	SOMERVILLE et al., "Immunodetection of PrP ^{Sc} in spleens of some scrapie-infected sheep but not BSE-infected cows", <u>Journal of General Virology</u> , 7:2389-2396 (1997)	
	BG	FRENKEL et al., "N-terminal EFRH sequence of Alzheimer's β -amyloid peptide represents the epitope of its anti-aggregating antibodies", <u>Journal of Neuroimmunology</u> , 88:85-90 (1998)	
	BH	SCHENK et al., "Letters of nature immunization with amyloid- β attenuates Alzheimer-disease-like pathology in the PDDAPP mouse", <u>Nature</u> , 400:173-177 (1999)	
	BI	SOLOMON et al., "Monoclonal antibodies inhibit <i>in vitro</i> fibrillar aggregation of the Alzheimer β -amyloid peptide", <u>Proc. Natl. Acad. Sci. USA</u> , 93:452-455 (1996)	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number

09/830,954

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May 3, 2001

First Named Inventor

Beka SOLOMON et al.

Group Art Unit

Examiner Name

Attorney Docket Number

SOLOMON=2C

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

[illegible]

Examiner
Signature

Date
Considered

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